Attorney Docket No. TR-041-US

REMARKS

Claims 1,2,8, and 9 have been canceled without prejudice.
New claims 17-19 have been introduced.

Claims 3 and 10 have been amended to include limitations of claims 1 and 8 respectively as suggested by the Examiner in order to make these claims allowable.

Claim 12 has been amended to provide a correct claim dependency.

Claims 4-7 depend on the amended claim 3, and claims 11-13 depend on the ameneded claim 10, and therefore should be allowable as well.

Claims 14-16 are allowed as stated by the examiner in s.3 of the examination report.

New claims 17-19 (addressed to the method of determining a topology of a network) are of the same scope as allowed claims 14-16 addressed to the optical network itself.

An early allowance of this application is respectfully requested.

The Commissioner is hereby authorized to deduct any prescribed fees for these amendments from our Company's **Deposit Account No. 501832**.

Yours truly,
OBEDA, P.D., et al

By: _____
Victoria Donnelly
Patent Agent
Reg. No. 44,185

VD/tk.
c/o TROPIC NETWORKS INC.,
Intellectual Property Department
135 Michael Cowpland Drive
Kanata, Ontario, Canada.
K2M 2E9

Date: June 3, 2005
Telephone: (613) 270-6026
FAX: (613) 270-9663
e-mail: Victoria.Donnelly@tropicnetworks.com

Attorney Docket No. TR0041-US

U.S. Patent Application Serial No. 09/963,501

CLAIMS (marked-up copy):

~~1.~~ (canceled) ~~A method of determining topology of an optical WDM (wavelength division multiplex) network in which optical signals comprising a plurality of WDM optical channels are communicated, comprising the steps of:~~

~~modulating each optical channel with a respective signal comprising a channel identity;~~

~~detecting the channel identities of all of the optical channels in an optical signal at each of a plurality of points in the network to produce a channel list for each of said points; and~~

~~identifying matched pairs of channel lists to determine optical paths of the network between pairs of said points.~~

2. (canceled) ~~A method as claimed in claim 1 wherein the step of detecting channel identities comprises detecting the channel identities of all of the optical channels in an optical signal at each of a plurality of optical paths entering or leaving each of a plurality of nodes of the network.~~

3. (currently amended) A method of determining topology of an optical WDM (wavelength division multiplex) network in which optical signals comprising a plurality of WDM optical channels are communicated, comprising the steps of:

modulating each optical channel with a respective signal comprising a channel identity;

detecting the channel identities of all of the optical channels in an optical signal at each of a plurality of points in the network to produce a channel list for each of said points;

identifying matched pairs of channel lists to determine optical paths of the network between pairs of said points;

~~A method as claimed in claim 1~~ wherein the step of detecting channel identities comprises detecting the channel identities of all of the optical channels in an optical signal at a multiplex port of each of a plurality of optical band filters to produce a respective channel list M, and determining a channel list T for a through port of the respective optical band filter, the channel list T comprising channels of the list M which are not within a pass band of the filter.

4. (original) A method as claimed in claim 3 wherein the step of identifying matched pairs of channel lists comprises, for each of a plurality of nodes of the network, identifying matched pairs of channel lists among the channel lists M and T for different optical band filters of the node to determine optical paths within the node.

5. (original) A method as claimed in claim 4 wherein the step of identifying matched pairs of channel lists further comprises, for each of the nodes, identifying any optically transparent optical band filters for which the channel lists M and T are the same, and identifying any channel lists, from among said matched pairs of channel lists of the node, matching said same channel lists M and T to

determine optical connections of said optically transparent optical band filters within the node.

6.(original) A method as claimed in claim 1 wherein the step of modulating each optical channel with a respective signal comprising a channel identity comprises variably attenuating an optical signal of the optical channel in dependence upon a signal comprising the respective channel identity.

7.(original) A method as claimed in claim 6 wherein the signal comprising the respective channel identity has a frequency of the order of about 1 MHz or less.

8.(canceled) ~~A method of determining topology of an optical WDM (wavelength division multiplex) network in which optical signals comprising a plurality of WDM optical channels are communicated among a plurality of nodes of the network, comprising the steps of:~~

~~modulating each optical channel with a respective signal comprising a channel identity;~~

~~for each of a plurality of optical paths entering or leaving each of a plurality of nodes, determining a channel list of all the optical channels in an optical signal on the optical path, this step comprising detecting the channel identities of all of the optical channels in an optical signal at each of a plurality of points; and~~

~~identifying matching channel lists to determine optical paths of the network between the nodes.~~

9. (canceled) ~~A method as claimed in claim 8 wherein the step of determining a channel list of all the optical channels in an optical signal on an optical path entering or leaving a node comprises detecting the channel identities of all of the optical channels in an optical signal on the respective optical path.~~

10. (currently amended) A method of determining topology of an optical WDM (wavelength division multiplex) network in which optical signals comprising a plurality of WDM optical channels are communicated among a plurality of nodes of the network, comprising the steps of:

modulating each optical channel with a respective signal comprising a channel identity;

for each of a plurality of optical paths entering or leaving each of a plurality of nodes, determining a channel list of all the optical channels in an optical signal on the optical path, this step comprising detecting the channel identities of all of the optical channels in an optical signal at each of a plurality of points; and

identifying matching channel lists to determine optical paths of the network between the nodes;

~~A method as claimed in claim 8~~ wherein the step of determining a channel list of all the optical channels in an optical signal on an optical path entering or leaving a node comprises, for each node:

detecting the channel identities of all of the optical channels in an optical signal at a multiplex port

of each of a plurality of optical band filters of the node to produce a respective channel list M;

determining a respective channel list T for an optical signal at a through port of the respective optical band filter, the channel list T comprising channels of the respective list M which are not within a pass band of the optical band filter;

identifying matching channel lists M and T to determine optical paths within the node; and

identifying unmatched channel lists M or T as channel lists for optical path entering or leaving the node.

11. (original) A method as claimed in claim 10 wherein the step of identifying matching channel lists M and T to determine optical paths within the node comprises identifying any optically transparent optical band filters of the node for each of which the channel lists M and T are the same; identifying matched pairs of the other channel lists M and T for the node to determine optical paths between respective ports of different optical band filters within the node; and identifying any channel lists, from among said matched pairs of channel lists for the node, matching said same channel lists M and T to determine optical connections of said optically transparent optical band filters within the node.

12. (currently amended) A method as claimed in claim ~~8~~10 wherein the step of modulating each optical channel with a respective signal comprising a channel identity comprises

variably attenuating an optical signal of the optical channel in dependence upon a signal comprising the respective channel identity.

13. (original) A method as claimed in claim 12 wherein the signal comprising the respective channel identity has a frequency of the order of about 1 MHz or less.

14. (original) An optical WDM (wavelength division multiplex) network comprising a plurality of nodes and optical paths for communicating optical signals, comprising a plurality of WDM optical channels, within and among the nodes, the network comprising:

a source for each optical channel;

a modulator for modulating each optical channel with a respective signal comprising a channel identity;

a plurality of optical filters for combining optical channels to produce optical signals and for separating optical signals to derive optical channels from the optical signals;

a plurality of detectors for detecting the channel identities of all of the optical channels in an optical signal at each of a plurality of points in the network to produce a channel list for each of said points; and

a network management system for identifying matched pairs of said channel lists to determine optical paths of the network between pairs of said points.

15. (original) An optical WDM network as claimed in claim 14 wherein the optical filters comprise optical band filters each having a multiplex port, an add or drop port, and a through port, and said plurality of points in the network comprise multiplex ports of the optical band filters.

16. (original) An optical WDM network as claimed in claim 15 wherein the network management system is arranged to determine a channel list for a through port of an optical band filter by omitting, from optical channels of a channel list for the multiplex port of the respective optical band filter, optical channels within a pass band of the optical band filter.

17. (new) A method of determining topology of an optical WDM (wavelength division multiplex) network comprising a plurality of nodes and optical paths for communicating optical signals within and among the nodes, the optical signals comprising a plurality of WDM optical channels, the method comprising:

modulating each optical channel with a respective signal comprising a channel identity;

at a plurality of optical filters in the network, combining optical channels to produce optical signals and separating optical signals to derive optical channels from the optical signals;

at a plurality of points in the network, detecting the channel identities of all of the optical

channels in an optical signal at each of said points in the network to produce a channel list for each of said points; and

at a network management system, identifying matched pairs of said channel lists to determine optical paths of the network between pairs of said points.

18.(new) A method as claimed in claim 17 wherein the steps of combining and separating comprise combining optical channels into optical signals and separating optical signals into optical channels at the optical filters, which comprise optical band filters each having a multiplex port, an add or drop port, and a through port, and said plurality of points in the network comprise multiplex ports of the optical band filters.

19.(new) A method as described in claim 18 wherein the step of identifying comprises identifying matched pairs at the network management system, which is arranged to determine a channel list for a through port of an optical band filter by omitting, from optical channels of a channel list for the multiplex port of the respective optical band filter, optical channels within a pass band of the optical band filter.